[For information on pottery sherds discovered in an archaeological context, see 62: Kaeppler in Category 172.]

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

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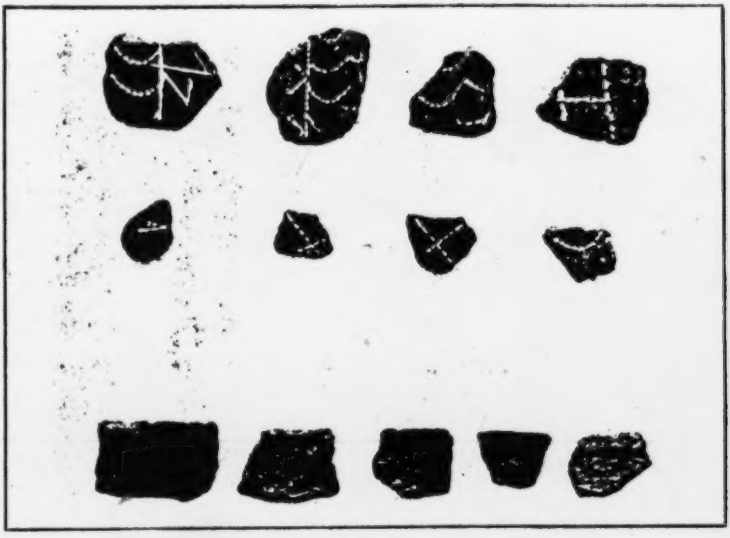

A

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B

[128] A, POTSHERDS TAKEN FROM SITES IN TONGATABU, THE TOP TWO ROWS SHOW INCISED DECORATIONS (PAINTED WHITE TO FACILITATE PHOTOGRAPHY); THE BOTTOM ROW SHOWS RIM PIECES; B, FIJIAN POTTERY OF THE EINER TYPE, SHOWING SHAPE, INCISED AND MODELED DECORATIONS, AND VARNISHED SURFACES.

[End Plate 6]

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

POTTERY

DESCRIPTION

Inasmuch as the discovery of pottery in prehistoric Polynesia has no known precedent, the facts regarding this Tongan ware are recorded here in some detail. The potsherds found number 1,587: 2 pieces on Pangaimotu, 5 on Motutapu, 23 pieces at two sites on Eua, and 1,577 at three sites on Tongatabu.

There are no obvious differences in pottery types found at different locations, or at different depths. At first examination, there appeared to be three types of pottery, found mixed and evenly distributed throughout all three of the Tongatabu sites and the Cave II site on Eua; the potsherds found elsewhere were too few to include all varieties. There seemed to be (a) a brick-red, very porous, brittle type, (b) a red-brown, harder, lightly burnished type, and (c) a relatively hard, black type. Excellent examples of each of these varieties could be selected easily from among any considerable number of sherds. But when it was attempted to assign every potsherd to one or another of these three classes, it soon developed that the extremes of each type blended so well into the extremes of the other types that no satisfactory lines could be drawn between them. Moreover, a given piece of pottery might have a black-textured interval, a brick-red inner surface, and a burnished brown exterior, or any other combination of the elements of classification. This made it necessary to include all specimens under a single type, paying careful attention to the large range of variations. The very small size of even the largest sherds contributed to give the appearance of several distinct types.

The pottery is highly porous, lightly fired, fragile ware. The consistently red ware is noticeably the softest, the smooth, brown ware denser, the consistently dark brown and black ware the hardest, showing the coinciding of greater density with deeper coloring to be largely indicative of the degree of firing. Thus, much of the variety in color is due to uneven firing. In some pots the exterior surface is probably soot-blackened from use as a cooking vessel and the interior surface discolored through contact with the cooking food. Some sherds that are uniformly colored a dead black through and through suggest dyeing. Most of the pottery is so porous that any liquid dye into which it might be dipped would thoroughly saturate it. Some examples of slipped surfacing are noticeable, usually a consistently thin, abruptly distinct coating of bright, unnatural red, or of pale terra cotta, upon a ground of decidedly different color.

The surfaces of the sherds range from moderately smooth to lightly burnished. The poorest type of surface shows light, lateral striation,

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

172 323 [531] apparently due to finger-smoothing by the potter. Some spatula striations are so smooth and regular as to suggest ornamental treatment. A good proportion of the material shows smooth surfacing of an inferior kind, free from major irregularities but possessing no marked finish. Lightly burnished surfaces are not uncommon and are usually associated with darker coloring.

172 323 531 Two methods of design were recognized, or one certain and a probable second method. The certain type of decoration consists of narrow, incised lines and accompanying series of dots, arranged in straight lines and small curves which seem to have been made with a sharply pointed instrument. This decoration is not common, occurring on only eleven pieces (Pl. VI, *A*). The doubtful type of decoration consists of corrugations, placed laterally about the vessel and roughly parallel. In two of the three pieces showing this technique, the decoration is near the rim. The pottery is characterized, from an ornamental standpoint, by its general lack of decorative treatment.

172 323 128 It is difficult to determine the original shapes of the pottery vessels represented by the sherds, due largely to the prevailing small size of the sherds. Attempts to fit sherds together to form larger elements were entirely without profitable results. The curves of various pieces suggested globose vessels 10 to 45 cm. in maximum diameter. Pieces ranged in thickness from 0.35 to 2.2 cm. The average thickness is about 0.75 cm. Other 172 323 pieces show a contact between a curving side and a flat surface, presumably a flat base. The approximate angle defined by such surface bends is anywhere from 25° to 45° (fig. 49, *b*).

Most of the 106 rim pieces are horizontally squared, the others rounded. In most sherds the rim is greater in diameter than that portion immediately below its lip. Generally the walls of the vessel narrow immediately preceding the rim, and swell with its culmination. In some specimens this ultimate swelling is greater than the actual breadth of the rim. Some straight rims have a uniform diameter throughout. There are no positive indications of bottles, or vessels with true necks. Some vessels appear to have contracted tops but wide orifices. In others the rim curls back with an outward flare, resulting in a funnel-shaped opening (fig. 49, *a*). Two pieces, both from the Nukualofa site, show evidence of a coiling technique of manufacture.

DISCUSSION

The available evidence certainly indicates that pottery was used in prehistoric Tonga. At several scattered places it was found, in stratified deposits, occurring most plentifully in strata free from evidence of European contact. Where European culture-bearing strata occurred, the pottery was

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

found to be much more plentiful in lower strata where the European elements were lacking. The occurrence of pottery at various, scattered sites indicates a general rather than a peculiarly local use. The ware may be described, briefly, as rude, indifferently made, and serviceable rather than ornamental.

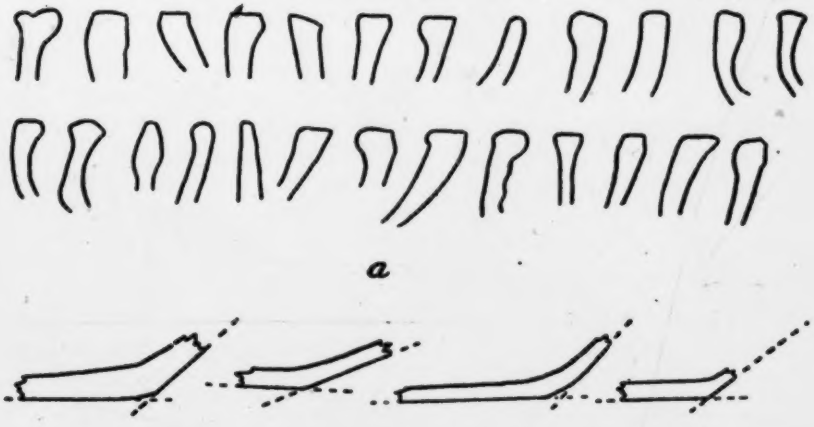

FIGURE 49.—Sketches of Tongan potsherds: *a*, rim profiles; *b*, base angles.

Though ethnologists have generally disregarded the presence of pottery in any part of Polynesia, there are several published references to the primitive use of pottery in Tonga. Cook (3, vol. 2, p. 21) says: "They [natives of Nomuka] have some of the same sort of earthen pots we saw at Amsterdam [Tongatabu]; and I am of opinion they are of their own manufacture, or that of some neighboring isle." Forster (9, vol. 1, p. 471) saw pottery on Eua, of which he says:

"We likewise bought some small earthen pots, perfectly black with soot on the outside, and suspected them to be memorials of Tasman's voyage; but afterwards we rather believed that they were manufactured by the natives themselves." D'Urville (5, vol. 4, p. 281) finishes a paragraph on Tongan cooking methods with: ". . . enfin quelquefois ils les font bouillir dans les vases en terre qu'ils tirent des isles Viti."

Dillon (6, vol. 2, p. 81) contributes the following to the historical evidence: "They perform the process of boiling in earthen pots of the manufacture of the Feejee Islands. . . ."

The accounts, few as they are, are conflicting. Cook and Forster thought the pottery of local manufacture. D'Urville and Dillon positively state that

7: McKern A-4,5 (1920-1921) 1929 0U9 Tonga 0U9

it was brought from Fiji, but neither of these writers, whose works include a great deal of material borrowed from previous reports, especially Mariner's, were above expressing an opinion as a fact, even when the opinion was appropriated from another writer, without personal investigation. Of the four writers, Cook was the most careful observer and authentic reporter, but his contribution is admittedly an opinion, of which Forster's statement is probably a reflection.

Burton (1, p. 52) has shown that the Fijians were the best potters in Oceania and it seems highly probable that Tongan pottery had its original conception in Fiji (Pl. VI, *B*), but it seems altogether improbable that the Tongans, using pottery rather extensively as it seems, went to Fiji for all their pots. The very character of the Tongan, with his alert resourcefulness, striking adaptibility, and eager readiness to learn, contradicts such a possibility.

Unfortunately, the amount and condition of the material available from Tonga is such that a direct comparison with modern Fijian specimens is not as profitable as could be wished. However, such a comparison bears some fruit.

Fijian pottery consists of red and brown ware, lightly fired (20, pp. 38-39). In these respects it is identical to Tongan ware. Fijian ware includes two distinct types, cooking pots and decorated vessels. The cooking-pot ware seems identical in material and surface to a large proportion of the Tongan potsherds. The decorated ware includes many prettily designed drinking cups, vessels with compound bodies, handled ware, and vessels with eccentric shapes, all more or less embellished with decorative fillets and nodes in salient relief, and with incised lines and simple patterns (8, pp 194-195). No examples of relief decoration, or of elaborate shapes, were found in examining the Tongan ware. Not even the broken fragment of a pottery handle was found. Incised lines and simple patterns decorate several of the sherds, but the design and technique differ materially from those I have seen on Fijian pottery, which is tempered with sand (24, p. 5). The Tongan pieces show no apparent tempering of any kind, but may contain a small amount of fine sand. The finer ware of Fiji is varnished, while still hot, with an application of the gum of the *dakou* (19, pp. 357-359). It is doubtful whether this surfacing would have long survived under conditions accompanying the accumulation of kitchen refuse. In any case, no such surfacing was seen on Tongan ware although some pieces exhibit smooth, semi-glossy exteriors. A red surface was applied to some Fijian vessels through the use of a vegetable stain (24, p. 5). A similar treatment may account for the unnaturally bright red surfaces of some Tongan sherds.

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

Tongan pottery seems to resemble that of Fiji in many essential traits, as is to be expected, but to differ somewhat from it in many details. The similarity between the cooking wares is much more pronounced than that between the finer, decorated ware.

Good sources of clay in Tonga were not observed, but there were volcanic as well as coral islands in the group to serve as possible sources, and clay is probably not uncommon. There certainly is no lack of stubborn, sticky mud, as the roads will testify.

CONCLUSION

The culture traits and products disclosed by archaeological investigations in Tonga are representative of the entire group rather than of peculiarly different districts; a single culture was disclosed. Certain rare, unique features may have been either local peculiarities within the culture, isolated innovations resulting from foreign diffusion, or monuments of an intruding culture. Their rare occurrence renders them generally unimportant. A list of these unique features might include the Fijian type of house platform observed on the island of Mango, the square house platform on the island of Utungaki, the stone fortification on the island of Late, the petroglyphs on the islands of Telekivavau and Tonumea, and even the great trilithon on Tongatabu.

On the other hand, the Tongan tendency towards the quick adoption of new ideas, whether of local or foreign conception, a characteristic very apparent in the historic Tongan, could only have resulted in a mottled culture with many peculiar expressions, which might have included any or all such highly individualistic features.

Not only are sub-divisions of negligible importance in this province, but no reasonable indication of a human culture or foreign race of people preceding the culture and race of its historic occupation was encountered. This statement is made with a full realization of the paucity of known data reflecting any great antiquity, but with the feeling that this paucity is principally due to the non-existence of such data.

A great part of the investigation was limited to the Tongatabu group of islands. This was not due to any arbitrary selection on my part, but rather to the illuminating fact that sites apparently worthy of investigation, considering the limited time available for work, are relatively rare elsewhere. This is true of structures of stone and earth, accumulations of kitchen refuse, and all other interesting features, definitely indicating a much more intesively inhabited state in the south of the archipelago than in the north. Native traditions to the effect that Tongatabu was settled before Haapai and Vavau, and that these groups remained but sparsely settled until com-

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

172 being employed by the Fijians to build vessels (17). A similar specializa-
171 tion in stone work, under the encouragement of a favorable political state,
333 might in the same way have produced a technique superior to that of the
501 place from which the craft was introduced.

The importance of Fijian influence over Tongan culture is apparent in
172 aspects other than that of masonry. The fortifications of Tonga were less
171 like those of Samoa than like those of Fiji. Tongan pottery is certainly
[712] Fijian in origin and basic type; Samoa had no pottery. Tongan burial methods
[323] were much more like those of Fiji than of Samoa. The Tongan language
[764] has borrowed a considerable number of Fijian terms. This list of Fijian
[192] elements intrusively present in the culture of Tonga might be carried to a tedious length.

There is nothing extraordinary in the tendency of Tonga to drift, cul-
172 turally, farther away from Samoa and closer to Fiji. The Samoans were
171 relatively peaceful; the Fijians were warlike. Tonga, possibly under the
648 influence of its political solidarity, became a power at war, and the mingled admiration and sympathy of its young men of social prominence went to Fiji rather than to Samoa. Fiji became the war college of Tonga, whose young men were sent to this distant seat of interminable quarrels and petty wars to acquire experience in the war parties of Fijian chieftains. Aside from this, Samoa was a land of people and things similar to those of Tonga; Fiji was a land of strange people and strange customs. The spirit of curiosity and adventure, so apparent in the Tongan, attracted him to the new and strange rather than to the more familiar and less exciting. He felt the lure
[501] of the unfamiliar, the enchantment of the strange land. The fact that Fiji possessed a type of sailing vessel far superior to any in either Tonga or Samoa, and the necessity for Tonga, with its hundred and more scattered islands, to survive as a political unit only through a mastery of sea craft, may have had an important bearing on the close cultural relationship which sprang up between the two countries.

62: Kaeppler E-4,5 (1964-1967) OU9 Tonga OU9
Ha'apai
Tungua

POTTERY SHERDS FROM TUNGUA

sites. The Ha'ateiho line of chiefs belongs to Falefisi, which is the patrilineal line of the Tamahā, i.e., the Tu'i Tonga's sister's daughter.[5] The origin of this line is traced by tradition to a chief of Fiji. The Tamahā held the highest social rank in Tonga and was the recipient of many gifts. Indeed, one of the traditional barkcloth designs of Tungua is the *'akau ha'amo* which represents the carrying pole used by Tupou I to bring gifts to the Tamahā. A number of Tamahā lived, at least part of the time, on Tungua and some of the Tamahā are said to be buried there, including the last Tamahā, Amelia. I suggest that the pots were not made in Tungua, but were part of the household-ware brought with the Tamahā from Ha'ateiho or were gifts from other chiefly lines of Tonga and possibly Fiji.

It is possible that the distribution of pottery may be explained by the distribution of living places[6] of the high chiefs. Besides the Ha'ateiho line of chiefs, which was associated with the high "social ranking" Tamahā, the three highest "societal ranking" lines of Tonga were the Tu'i Tonga line and the lines of the Tu'i Ha'a Takalaua and the Tu'i Kanokupolu (Ha'a Ngata). The Tu'i Tonga line is associated with the Lapaha area and more anciently with Heketā (near the Ha'amonga trilithon); the Ha'a Takalaua line with the Tatakamotonga area (Lapaha and Tatakamotonga are collectively known as Mu'a); and the Ha'a Ngata line with the village of Kanokupolu, *i.e.*, four areas outside of Ha'ateiho with a concentration of pottery-bearing sites (I have collected surface pottery in all these areas). Ethnohistoric inquiry into the ownership of other pottery-bearing sites might reveal similar chiefly connections, as well as the lack of such connections in the sites with little pottery such as Atele[7] and some of those investigated by McKern.[8]

Archaeologists who have worked in Tonga seem to assume that pottery was used widely by all levels of the society. However, what we know about the consumption patterns of material culture in Tonga in the eighteenth century would indicate that this was not necessarily the case.[9] Certain kinds of material culture were made primarily for use by the chiefs. Early migrants to Tonga (*i.e.*, proto-Polynesians) perhaps did make considerable use of pottery which could account for the fact that a few potsherds are found almost everywhere. But I suggest that the development of the Tongan hierarchical social structure and the decline of pottery (and its decoration) went hand in hand and resulted in the retention of pottery for use by the chiefs and their households. Though one might argue that the exclusive use of pottery by chiefs goes against the notion of dropout of decoration and elaboration, I propose an alternative explanation. That is, if pots were no longer widely used, the mere fact that there were pots would make them special and there would be no need for elaboration, especially at the end of the sequence when few pots were used at all. At the middle of the sequence, however, the decorated pots may have been used by high chiefs and undecorated pots by lesser chiefs.[10] This could account for the increasing attenuation of Lapita decorated sherds which has been noted by archaeologists but not satisfactorily explained.[11] Similar retentions and changes have occurred since the eighteenth century. Some items of material culture which would appear to have

5. See Kaeppler 1971b:181–183.
6. Items of material culture were not usually included as grave goods with Tongan burials so there is no reason to expect that the appearance of sherds indicates a burial ground. If sherds and burials are found in the same area, it is likely that they are not contemporaneous.
7. Davidson, 1969.
8. McKern, 1929.
9. Kaeppler, 1971a.
10. See Kaeppler, 1971a:214–215 for an analogous elaboration of fly whisks which were also used only by chiefs.
11. See Groube 1971:281, 302–304.

62: Kaeppler E-4,5 (1964-1967) OU9 Tonga OU9
Ha'apai
Tungua

been in general use in pre-European times (wooden headrests, for example) have been generally replaced by Western imports (pillows in this case). Many chiefs, however, still make use of the traditional objects, especially on ceremonial occasions (such as weddings when wooden headrests are part of the necessary presentations).[12] Perhaps by the eighteenth century only the highest chiefs made use of pottery, and the few pots needed were not manufactured in Tonga but came from Fiji.

Some of the pottery-bearing areas were visited by Cook, who collected two pots at Amsterdam (Tongatapu) on his second voyage.[13] On his third voyage Cook met the Tamahā Moungalakepa and her brother Latunipulu and it is conceivable that Cook received pots from them.[14] One of these pots eventually reached England and became part of Sir Ashton Lever's Museum.[15] This pot was purchased at the dispersal of the Leverian Museum in 1806 by a Mr Atkinson as part of lot 4441, "... baked earthen bottle, New Amsterdam."[16] Although I have found other items purchased by Atkinson, I have not yet found his Tongan pot. There is a chance, however, that this eighteenth-century Tongan pot still exists and will eventually help to settle the question regarding Tongan v. Fijian manufacture of pottery during the eighteenth century.[17]

In a recent publication, Bulmer has concisely described the role of ethnography in reconstructing the prehistory of Melanesia[18] and has encouraged ethnographers and ethnohistorians to provide more useful data. A similar need exists for Polynesian ethnographers to make their relevant material available for use by archaeologists and prehistorians. Archaeologists who have worked in Tonga have made some use of the ethnohistoric information, but more creative use of this information, as well as ethnographic data, might contribute to a resolution of the divergent explanations existing in the present interpretations in the Tongan prehistoric sequence. Green, for example, explains the lack of pottery in certain areas by a long aceramic horizon,[19] while Golson and Poulsen, basing their explanation on a series of radiocarbon dates, had come to the opposite conclusion that pottery was made for the total span of Tongan prehistory and up to the period of European contact.[20] Green supports his view with the logical assumption that if pottery were present in the historic and protohistoric period, it would be mentioned in Tongan traditions.[21] However, an examination of such traditional material shows that mention of material culture of any kind is very rare except for what Tongans consider *koloa* (valuables), namely mats and barkcloth that are given on ceremonial occasions. Golson and Poulsen now would appear to agree with Groube that C^{14} dates do not necessarily date pottery found in the same levels.[22] Groube explains the distribution of pottery sites on ecological

12. At the time of European contact wooden headrests were elaborate and varied but by the twentieth century, when they were used mainly by chiefs, only two simple types survived.
13. Beaglehole, 1961:265.
14. Anderson (Beaglehole, 1967:942) and Samwell (Beaglehole, 1967:1037) both mention seeing pottery.
15. It is more likely that the Leverian pot came from 3rd voyage (see Force, Force & Kaeppler, in preparation).
16. Leverian Museum, 1806:207.
17. The eighteenth century pot depicted in Labillardière is clearly a Fijian pot (1802, plate 31). It is difficult to tell whether the globular object depicted in Tasman's journal (Sharp, 1968:161) is a Fijian-style pot or a coconut water container.
18. Bulmer, 1971.
19. Green, 1972:83.
20. Golson, 1971:74.
21. Green, personal communication.
22. Golson, personal communication.